

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/718,311A
Source: TFW/6
Date Processed by STIC: 12/11/06

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IFW16

RAW SEQUENCE LISTING

DATE: 12/11/2006

PATENT APPLICATION: US/10/718,311A

TIME: 12:31:00

Input Set : A:\BC1015USDIVcorrection_ST25.txt

Output Set: N:\CRF4\12112006\J718311A.raw

3 <110> APPLICANT: E.I. duPont de Nemours and Company, Inc.
 4 Meyer, Knut
 5 Viitanen, Paul
 6 Van Dyk, Drew E.
 8 <120> TITLE OF INVENTION: High Level Production of P-Hydroxybenzoic Acid in Green
 Plants
 10 <130> FILE REFERENCE: BC1015 US DIV
 12 <140> CURRENT APPLICATION NUMBER: US 10/718,311A
 13 <141> CURRENT FILING DATE: 2003-11-20
 15 <160> NUMBER OF SEQ ID NOS: 18
 17 <170> SOFTWARE: PatentIn version 3.4
 19 <210> SEQ ID NO: 1
 20 <211> LENGTH: 32
 21 <212> TYPE: DNA
 22 <213> ORGANISM: artificial sequence
 24 <220> FEATURE:
 25 <223> OTHER INFORMATION: Primer
 27 <400> SEQUENCE: 1
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 31 <210> SEQ ID NO: 2
 32 <211> LENGTH: 34
 33 <212> TYPE: DNA
 34 <213> ORGANISM: artificial sequence
 36 <220> FEATURE:
 37 <223> OTHER INFORMATION: Primer
 39 <400> SEQUENCE: 2
 40 catcttacta gatcttttagt acaacgggtga cgcc 34
 43 <210> SEQ ID NO: 3
 44 <211> LENGTH: 495
 45 <212> TYPE: DNA
 46 <213> ORGANISM: Escherichia coli
 48 <400> SEQUENCE: 3
 49 atgtcacacc ccgcgttaac gcaactgcgt gcgctgcgct attgtaaaga gatccctgcc 60
 51 ctggatccgc aactgctcga ctggctggtg ctggaggatt ccatgacaaa acgttttgaa 120
 53 cagcagggaa aaacggtaag cgtgacgatg atccgcgaag ggtttgctga gcagaatgaa 180
 55 atccccgaag aactgccgct gctgccgaaa gagtctcggt actggttacg tgaaattttg 240
 57 ttatgtgccg atggtgaacc gtggttggcc ggctgtaccg tcgttcctgt gtcaacgta 300
 59 agcggggccg agctggcggt acaaaaattg ggtaaaacgc cgttaggacg ctatctgttc 360
 61 acatcatcga cattaaccgc ggactttatt gagataggcc gtgatgccgg gctgtggggg 420
 63 cgacgttccc gctgcgatt aagcggtaaa ccgctgttgc taacagaact gtttttaccg 480
 65 gcgtcaccgt tgtac 495
 68 <210> SEQ ID NO: 4
 69 <211> LENGTH: 165
 70 <212> TYPE: PRT

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71 <213> ORGANISM: Escherichia coli

73 <400> SEQUENCE: 4

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76 1 5 10 15

79 Glu Ile Pro Ala Leu Asp Pro Gln Leu Leu Asp Trp Leu Leu Leu Glu

80 20 25 30

83 Asp Ser Met Thr Lys Arg Phe Glu Gln Gln Gly Lys Thr Val Ser Val

84 35 40 45

87 Thr Met Ile Arg Glu Gly Phe Val Glu Gln Asn Glu Ile Pro Glu Glu

88 50 55 60

91 Leu Pro Leu Leu Pro Lys Glu Ser Arg Tyr Trp Leu Arg Glu Ile Leu

92 65 70 75 80

95 Leu Cys Ala Asp Gly Glu Pro Trp Leu Ala Gly Arg Thr Val Val Pro

96 85 90 95

99 Val Ser Thr Leu Ser Gly Pro Glu Leu Ala Leu Gln Lys Leu Gly Lys

100 100 105 110

103 Thr Pro Leu Gly Arg Tyr Leu Phe Thr Ser Ser Thr Leu Thr Arg Asp

104 115 120 125

107 Phe Ile Glu Ile Gly Arg Asp Ala Gly Leu Trp Gly Arg Arg Ser Arg

108 130 135 140

111 Leu Arg Leu Ser Gly Lys Pro Leu Leu Leu Thr Glu Leu Phe Leu Pro

112 145 150 155 160

115 Ala Ser Pro Leu Tyr

116 165

119 <210> SEQ ID NO: 5

120 <211> LENGTH: 39

121 <212> TYPE: DNA

122 <213> ORGANISM: artificial sequence

124 <220> FEATURE:

125 <223> OTHER INFORMATION: Primer

127 <400> SEQUENCE: 5

128 ctactcactt agatctccat ggcttcctct gtcatttct 39

131 <210> SEQ ID NO: 6

132 <211> LENGTH: 32

133 <212> TYPE: DNA

134 <213> ORGANISM: artificial sequence

136 <220> FEATURE:

137 <223> OTHER INFORMATION: Primer

139 <400> SEQUENCE: 6

140 catcttactc atatgccaca cctgcatgca gc 32

143 <210> SEQ ID NO: 7

144 <211> LENGTH: 684

145 <212> TYPE: DNA

146 <213> ORGANISM: artificial sequence

148 <220> FEATURE:

149 <223> OTHER INFORMATION: Chimeric gene encoding chloroplast-targeted CPL fusion protein

151 <400> SEQUENCE: 7

152 atggcttcct ctgtcatttc ttcagcagct gttgccacac gcagcaatgt tacacaagct 60

154 agcatgggttg cacctttcac tgggtctcaaa tcttcagcca ctttccctgt tacaaagaag 120

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156 caaaaccttg acatcacttc cattgctagc aatggtggaa gagttagctg catgcagggtg      180
158 tggcatatgt cacacccgcg gttaacgcaa ctgcgtgcgc tgcgctattg taaagagatc      240
160 cctgccctgg atccgcaact gctcgactgg ctggtgctgg aggattccat gacaaaacgt      300
162 tttgaacagc agggaaaaaac ggtaagcgtg acgatgatcc gcgaagggtt tgtcgagcag      360
164 aatgaaatcc ccgaagaact gccgctgctg ccgaaagagt ctcgttactg gttacgtgaa      420
166 attttgttat gtgccgatgg tgaaccgtgg cttgccgggtc gtaccgtcgt tcctgtgtca      480
168 acgttaagcg ggccggagct ggcgttacaa aaattgggta aaacgccgtt aggacgctat      540
170 ctgttcacat catcgacatt aaccggggac tttattgaga taggccgtga tgccgggctg      600
172 tggggggcgac gttcccgccct gcgattaagc ggtaaaccgc tgttgctaac agaactgttt      660
174 ttaccggcgt caccgttgta ctaa                                          684
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178 <211> LENGTH: 227
179 <212> TYPE: PRT
180 <213> ORGANISM: artificial sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Synthetic chloroplast-targeted CPL fusion protein
185 <400> SEQUENCE: 8
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191 Val Thr Gln Ala Ser Met Val Ala Pro Phe Thr Gly Leu Lys Ser Ser
192          20          25          30
195 Ala Thr Phe Pro Val Thr Lys Lys Gln Asn Leu Asp Ile Thr Ser Ile
196          35          40          45
199 Ala Ser Asn Gly Gly Arg Val Ser Cys Met Gln Val Trp His Met Ser
200          50          55          60
203 His Pro Ala Leu Thr Gln Leu Arg Ala Leu Arg Tyr Cys Lys Glu Ile
204 65          70          75          80
207 Pro Ala Leu Asp Pro Gln Leu Leu Asp Trp Leu Leu Leu Glu Asp Ser
208          85          90          95
211 Met Thr Lys Arg Phe Glu Gln Gln Gly Lys Thr Val Ser Val Thr Met
212          100         105         110
215 Ile Arg Glu Gly Phe Val Glu Gln Asn Glu Ile Pro Glu Glu Leu Pro
216          115         120         125
219 Leu Leu Pro Lys Glu Ser Arg Tyr Trp Leu Arg Glu Ile Leu Leu Cys
220          130         135         140
223 Ala Asp Gly Glu Pro Trp Leu Ala Gly Arg Thr Val Val Pro Val Ser
224 145          150         155         160
227 Thr Leu Ser Gly Pro Glu Leu Ala Leu Gln Lys Leu Gly Lys Thr Pro
228          165         170         175
231 Leu Gly Arg Tyr Leu Phe Thr Ser Ser Thr Leu Thr Arg Asp Phe Ile
232          180         185         190
235 Glu Ile Gly Arg Asp Ala Gly Leu Trp Gly Arg Arg Ser Arg Leu Arg
236          195         200         205
239 Leu Ser Gly Lys Pro Leu Leu Leu Thr Glu Leu Phe Leu Pro Ala Ser
240          210         215         220
243 Pro Leu Tyr
244 225
247 <210> SEQ ID NO: 9
248 <211> LENGTH: 34

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249 <212> TYPE: DNA
250 <213> ORGANISM: artificial sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Primer
255 <400> SEQUENCE: 9
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259 <210> SEQ ID NO: 10
260 <211> LENGTH: 34
261 <212> TYPE: DNA
262 <213> ORGANISM: artificial sequence
264 <220> FEATURE:
265 <223> OTHER INFORMATION: Primer
267 <400> SEQUENCE: 10
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272 <211> LENGTH: 37
273 <212> TYPE: DNA
274 <213> ORGANISM: artificial sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: Primer
279 <400> SEQUENCE: 11
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283 <210> SEQ ID NO: 12
284 <211> LENGTH: 31
285 <212> TYPE: DNA
286 <213> ORGANISM: artificial sequence
288 <220> FEATURE:
289 <223> OTHER INFORMATION: Primer
291 <400> SEQUENCE: 12
292 catcttacta gatcttttagt acaacggtga c 31
295 <210> SEQ ID NO: 13
296 <211> LENGTH: 33
297 <212> TYPE: DNA
298 <213> ORGANISM: artificial sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Primer
303 <400> SEQUENCE: 13
304 cccgggggta cctaaagaag gagtgcgtcg aag 33
307 <210> SEQ ID NO: 14
308 <211> LENGTH: 46
309 <212> TYPE: DNA
310 <213> ORGANISM: artificial sequence
312 <220> FEATURE:
313 <223> OTHER INFORMATION: Primer
315 <400> SEQUENCE: 14
316 gatatcaagc tttctagagt cgacatcgat ctagtaacat agatga 46
319 <210> SEQ ID NO: 15
320 <211> LENGTH: 62
321 <212> TYPE: PRT

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322 <213> ORGANISM: artificial sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Synthetic chloroplast-targeting sequence
327 <400> SEQUENCE: 15
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330 1          5          10          15
333 Val Thr Gln Ala Ser Met Val Ala Pro Phe Thr Gly Leu Lys Ser Ser
334          20          25          30
337 Ala Thr Phe Pro Val Thr Lys Lys Gln Asn Leu Asp Ile Thr Ser Ile
338          35          40          45
341 Ala Ser Asn Gly Gly Arg Val Ser Cys Met Gln Val Trp His
342          50          55          60
345 <210> SEQ ID NO: 16
346 <211> LENGTH: 170
347 <212> TYPE: PRT
348 <213> ORGANISM: artificial sequence
350 <220> FEATURE:
351 <223> OTHER INFORMATION: Processed chloroplast-targeted CPL synthetic fusion protein
353 <400> SEQUENCE: 16
355 Met Gln Val Trp His Met Ser His Pro Ala Leu Thr Gln Leu Arg Ala
356 1          5          10          15
359 Leu Arg Tyr Cys Lys Glu Ile Pro Ala Leu Asp Pro Gln Leu Leu Asp
360          20          25          30
363 Trp Leu Leu Leu Glu Asp Ser Met Thr Lys Arg Phe Glu Gln Gln Gly
364          35          40          45
367 Lys Thr Val Ser Val Thr Met Ile Arg Glu Gly Phe Val Glu Gln Asn
368          50          55          60
371 Glu Ile Pro Glu Glu Leu Pro Leu Leu Pro Lys Glu Ser Arg Tyr Trp
372 65          70          75          80
375 Leu Arg Glu Ile Leu Leu Cys Ala Asp Gly Glu Pro Trp Leu Ala Gly
376          85          90          95
379 Arg Thr Val Val Pro Val Ser Thr Leu Ser Gly Pro Glu Leu Ala Leu
380          100          105          110
383 Gln Lys Leu Gly Lys Thr Pro Leu Gly Arg Tyr Leu Phe Thr Ser Ser
384          115          120          125
387 Thr Leu Thr Arg Asp Phe Ile Glu Ile Gly Arg Asp Ala Gly Leu Trp
388          130          135          140
391 Gly Arg Arg Ser Arg Leu Arg Leu Ser Gly Lys Pro Leu Leu Leu Thr
392 145          150          155          160
395 Glu Leu Phe Leu Pro Ala Ser Pro Leu Tyr
396          165          170
399 <210> SEQ ID NO: 17
400 <211> LENGTH: 180
401 <212> TYPE: PRT
402 <213> ORGANISM: Solanum lycopersicum
404 <400> SEQUENCE: 17
406 Met Ala Ser Ser Val Ile Ser Ser Ala Ala Val Ala Thr Arg Ser Asn
407 1          5          10          15
410 Val Thr Gln Ala Ser Met Val Ala Pro Phe Thr Gly Leu Lys Ser Ser

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VERIFICATION SUMMARY

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